REMARKS

Claims 1-10 are pending in this application. By this Amendment, claim 1 is amended. No new matter is added. Reconsideration of the application is respectfully requested.

Entry of the amendments is proper under 37 CFR §1.116 because the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issue requiring further search and/or consideration as the amendments amplify issues previously discussed throughout prosecution; and (c) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

The courtesies extended to Applicant's representatives by Examiners Luo and Ro at the interview held December 22, 2008, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below and constitute Applicants' record of the interview. During the interview, Examiners Luo and Ro agreed that the clarifying amendments would not raise any new issue requiring further search or consideration.

The Office Action rejects claims 1-8 under 35 U.S.C. §103(a) over U.S. Patent No. 6,679,346 to Raftari et al. (hereinafter "Raftari") in view of U.S. Patent Application Publication No. 2002/0145401 to Sato et al. (hereinafter "Sato"). This rejection is respectfully traversed.

Claim 1 recites, *inter alia*, a controller that estimates an amount of demagnetization of the permanent magnet motor based on a comparison between the reference value and an actual value under the control of the voltage control amount of only a q axis (applied under control of the permanent magnet motor using the d-q axis transformation) among the respective voltage control amount of the q axis and a d axis. Claim 1 also recites that the

controller estimates the amount of demagnetization based on a comparison between the reference value and an actual value under the control of the voltage control amount of only the q-axis among the respective voltage control amount of the q axis and a d axis.

The Office Action admits that Raftari does not teach this feature but asserts that Sato does. Applicants respectfully disagree with this assertion.

As discussed during the interview, Sato relates to a driver circuit for an electric motor, which is capable of performing a non-interference processing operation in which a d-axis control and a q-axis control are effected independently of each other. To achieve the non-interference processing operation, Sato discloses, at paragraph [0007], that an output current of the electric motor 20 is detected by a current detector 22, which converts a detected current into a d-q coordinate system defined by a d-axis of a rotor of the motor and a q-axis, which is perpendicular to the d-axis. Sato also discloses, at paragraph [0010], that the detected d-axis current and the q-axis current are applied to a non-interference processor 14, which is arranged to perform a predetermined arithmetic operation to generate voltages corresponding to the voltages of the d-axis and the q-axis. Sato then states, at paragraph [0025], that the use of the non-interference processor 14 makes it possible to perform the non-interference processing operation on the voltage commands and permits easy designing of the control system.

Therefore, as agreed to during the interview, Sato does <u>not</u> teach or suggest the use of the current applied on <u>only</u> the q-axis among the respective voltage control amount of the q-axis and the d-axis to estimate an amount of demagnetization of the permanent magnet motor. Therefore, one of ordinary skill in the art would not have been motivated to use the motor driver circuit disclosed by Sato in the demagnetization compensation system of Raftari.

In addition, the Office Action asserts that it would have been obvious to one of ordinary skill in the art to implement the teaching of Sato into Raftari because "Sato suggests

the beneficial use of the vector control for motor drive such as the d-axis current and q-axis current to be controlled independently of each other." However, the Office Action does not specifically point out why Sato's independent control of the d-axis and q-axis current would be beneficial to the demagnetization compensation system of Raftari. Moreover, Sato does not suggest any desirability to modify the system of Raftari. Therefore, the Office Action's suggested motivation for combination of Raftari and Sato must be relying on the impermissible hindsight knowledge gained from Applicants' disclosure.

Furthermore, even if Sato's independent control of the d-axis and q-axis current were combined with the teaching of Raftari (which Applicants do not admit would have been obvious), neither Raftari nor Sato specifically discloses that the controller estimates the amount of demagnetization based on a comparison between the reference value and an actual value under the control of the voltage control amount of only the q-axis among the respective voltage control amount of the q-axis and the d-axis. In other words, Sato may disclose individual control of the d-axis and q-axis current. However, neither Raftari nor Sato teach or suggest the use of only q-axis current and compare the reference value and the actual value of only the q-axis current to estimate the amount of demagnetization.

At least for the above reasons, Applicants respectfully submit that the rejection of improper, and claims 1-8 are patentable over Raftari and Sato. Accordingly, withdrawal of the rejection is respectfully requested.

The Office Action rejects claims 9 and 10 under 35 U.S.C. §103(a) over Raftari in view of Sato, and further in view of U.S. Patent Application Publication No. 2003/0062868 to Mir et al. (hereinafter "Mir"). This rejection is respectfully traversed.

Mir does not overcome the deficiency of Raftari and Sato with respect to claim 1. Therefore, claims 9 and 10 are allowable at least for their dependence on claim 1, as well as

for the additional features they recite. Accordingly, withdrawal of the rejection is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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